Customer Care Solutions
NPL-3 Series Transceivers

General Information

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NPL-3 Product Selection

The **NPL-3** is a Triple Band transceiver unit designed for the GSM850, GSM1800 and GSM1900 (EDGE) networks. It is a GSM850 phase 2 power class 4 transceiver (2W) and a GSM1800/1900 power class 1 (1W) transceiver. It is also an EDGE850 power class E2 (0.5W/27dBm) and an EDGE1800/1900 power class E2 (0.4W/26dBm) transceiver. The products share the WV8 radio module and differ in details on mechanics. Refer to the diagrams on the following pages.

NPL-3 Product and modules

Name	Type code	Material code/ module type	Module code
Basic transceiver	NPL-3	0504790	
Radio module		WV8	0202020
UI board		WK4	0202023
Mechanics assembly parts			0262937
Software module (basic SW)			On Flash memory

Figure 1: NPL-3 transceiver

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Accessories List

Batteries	Product code:
Battery BLD-3 720mAH Li-Ion	0670334
Chargers	**Product code:**
AC Travel Charger ACP-7E (EUR) 207-253 Vac	0675144
AC Travel Charger ACP-7U (US) 108-132 Vac	0675143
AC Travel Charger ACP-7C (China) 198-242 Vac	0675158
AC Travel Charger ACP-7X (UK) 207-253 Vac	0675145
AC Travel Charger ACP-7H (Hong Kong) 180-220 Vac	0675146
AC Travel Charger ACP-7A (AUS) 216-264 Vac	0675148
Performance Travel Charger ACP-8E (EUR) 90-264 Vac	0675195
Performance Travel Charger ACP-8K (Korea) 90-264 Vac	0675199
Performance Travel Charger ACP-8X (UK) 90-264 Vac	0675197
Performance Travel Charger ACP-8U (US) 90-264 Vac	0675196
Performance Travel Charger ACP-8C (China) 90-264 Vac	0675211
Performance Travel Charger ACP-8A (Australia) 90-264 Vac	0675214
Performance Travel Charger ACP-9E (EUR)	0675149
Performance Travel Charger ACP-9U (US)	0675151
Performance Travel Charger ACP-9X (UK)	0675150
Performance Travel Charger ACP-9A (AUS)	0675152
Performance Travel Charger ACP-9J (Japan)	0675153
Performance Travel Charger ACP-9UR (US)	0675159
Performance Travel Charger ACP-9UJ (Brazil)	0675169
Performance Travel Charger ACP-9C	0675204
Performance Travel Charger ACP-9UB	0675224
Performance Travel Charger ACP-9G (Brazil)	0675225
ACP-12E Travel Charger (EUR) 90-264 Vac	0675294
ACP-12X Travel Charger (UK) 90-264 Vac	0675296
ACP-12U Travel Charger (US) 90-264 Vac	0675303
ACP-12UB Travel Charger (Brazil) 90-264 Vac	0675203
ACP-12G Travel Charger (US) 90-264 Vac	0675295
ACP-12C Travel Charger (China) 90-264 Vac	0675297
ACP-12A Travel Charger (Australia) 90-264 Vac	0675300

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ACP-12AR Travel Charger (Argentina) 90-264 Vac	0675298
Portable and Office Accessories	**Product code:**
Stereo Headset HDS-3	0694093
Inductive Loopset LPS-4	0630443
Cigarette Lighter Charger LCH-12	0675120
Battery Charging stand DDC-1	0675243
Connectivity Desk Stand DCV-14	0675323
Connectivity Adapter Cable DKU-5	0730235
Music Stand DT-1	0694119
TTY-Adapter HDA-10	
Camera Headset HS-1C	0694124
Mobile Accessories: Carkit 143 (Americas)	**Product code:**
Handsfree unit HFU-4	0694103
Mobile Holder MBC-15S	0650041
Mounting plate MKU-1	0620036
Handsfree microphone HFM-8	0690016
External HF speaker HFS-12	0629009
System cable SCU-4	0630471
Power cable PCU-4	0630478
Boom headset HDB-4	0694094
Antenna Coupler AXF-15S	0750189

Mobile accessories (not included in Carkit Sales Pack):

Headrest handsfree BHF-1	0694102

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Technical Specifications

General Specifications of Transceiver NPL-3

Unit	Dimensions (mm) (L x W x T)	Weight (g)	Volume (cm^3)
Transceiver with BLD-3 720mAh Li-Ion battery pack	106 x 45 x 17.5	83	68

Parameter	Unit
Cellular System	GSM850, GSM1800 and GSM1900
RX Frequency Band	GSM850: 869 - 894 MHz GSM1800: 1805 - 1880 MHz GSM1900: 1930 - 1990 MHz
TX Frequency Band	GSM850: 824 - 849 MHz GSM1800: 1710 - 1785 MHz GSM1900: 1850 - 1910 MHz
Output Power	GSM850, GMSK: 5 ...33 dBm GSM850, 8-PSK: 5 ...27 dBm GSM1800, GMSK: 0 ...30 dBm GSM1800, 8-PSK: 0 ...26 dBm GSM1900, GMSK: 0 ...30 dBm GSM1900, 8-PSK: 0 ...26 dBm
Number of RF Channels	GSM850: 124 GSM1800: 374 GSM1900: 300
Channel Spacing	200 kHz
Number of TX Power Levels	GSM850 *: 15 GSM1800: 16 GSM1900: 16

Battery endurance

Nokia measurements of the operational times in GSM 850/ 1800 are:

Talk time*	
Battery : BLD-3	up to 2 – 5 hours
Talk time variations:	
Integrated Handsfree (IHF) talk time**	up to 1 h 45 min – 3 h 45 min
Standby time*	

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Battery: BLD-3	up to 150 – 300 hours
Radio + HDS-3	up to 20 hours
Radio + IHF	up to 8 hours

Nokia measurements of the operational times in GSM 1900 are:

Talk time*	
Battery: BLD-3	up to 3 – 6 hours
Talk time variations:	
Integrated Handsfree (IHF) talk time**up to 1 h 45 min – 3 h 45 min	
Standby time*	
Battery: BLD-3	up to 150 – 290 hours
Standby time variations***:	
Radio + HDS-3	up to 20 hours
Radio + IHF	up to 8 hours

Variation in operating times may occur depending on SIM card, network and usage settings, usage style and environments. Talk time is increased by up to 30% if half rate is active and reduced by 5% if enhanced full rate is active.

**Note: Volume level 7 used in calculation. Calculated from talk times.

***Note: Volume level 7 used in calculation. Phone idle.

Environmental conditions

Environmental condition	Ambient temperature	Notes
Normal operation	-10 °C ... +55 °C	Specifications fulfilled
Reduced performance	+55 °C ... +65 °C	Operational only for short periods
Intermittent operation	-20 °C ... -10 °C and +65 °C ... +85 °C	Operation not guaranteed but an attempt to operate will not damage the phone
No operation	-40 °C ... -20 °C	Operation not possible but an attempt to operate will not damage the phone
No operation or storage	< -40 °C and > +85 °C	No storage; an operation attempt may cause permanent damage
Charging allowed	-25 °C ... +60 °C	
Long term storage conditions	0 °C ... +40 °C	

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Transceiver Features

Transceiver main HW parts / features include:

- EGPRS
- Integrated Stereo FM radio with external audio amplifier
- Full graphic Colour Display
- Jack IV style UI with four soft keys
- Integrated IR link & internal data
- Internal vibra
- Integrated Hands Free (IHF) Speaker
- Pop-Port(TM) System Connector
- Plug-in SIM card below the back cover of the phone
- Back-mounted antenna (no connection for external antenna)

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Electrical Characteristics

Absolute Maximum Ratings

Parameter	Min.	Typical	Max.	Unit
Battery Voltage, Idle	-0.3		5.5	V
Battery Voltage, Call	-0.3		4.8	V
Charger Input Voltage	-0.3		16	V
Charging Current			850	mA

Supply Voltages

Parameter	Min.	Typical	Max.	Unit / Notes
Battery Voltage	3.1	3.6	4.2	V / SW cut-off 3.1 V

Current Consumption

Condition	Min.	Typical	Max.	Unit
Call (MoU) GSM 850 GSM1800 GSM1900		 294 221 212		mA
Idle (MoU)		3-4		mA
Power off			50	µA

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